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HTIRC-03-007

May 21, 2004

To: Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: Serial No. 10/812,695 03/30/04

Min Li et al.

DESIGN AND FABRICATION METHOD FOR AN IN-STACK STABILIZED SYNTHETIC STITCHED CPP GMR HEAD

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 24, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date Stephen B. Ackerman 5/24/04

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U.S. Patent 6,473,279 to Smith et al., "In-Stack Single-Domain Stabilization of Free Layers for CIP and CPP Spin-Valve or Tunnel-Valve Read Heads," teaches the formation of a first auxiliary ferromagnetic layer above the free layer which couples antiferromagnetically to the free layer by means of exchange coupling (RKKY coupling) across a non-magnetic coupling layer and a second auxiliary exchange pinning layer, which exchange pins the first auxiliary layer.

U.S. Patent 6,466,419 to Mao, "Current Perpendicular to Plane Spin Valve Head," teaches a CPP spin valve structure wherein a spacer layer is formed on the free layer and a biasing layer of antiferromagnetic material is formed on the spacer layer.

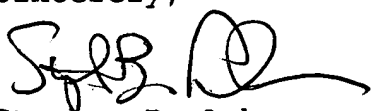
U.S. Patent Application Publication US 2003/0053269 A1 to Nishiyama, "CPP Magnetic Sensing Element and Method for Making the Same," teaches a method of forming a CPP in which the lateral sides of the CPP stack are sloped to the vertical and have two different slope angles.

U.S. Patent 5,627,704 to Lederman et al., "Thin Film Giant Magnetoresistive CPP Transducer with Flux Guide Yoke Structure," discusses a giant magnetoresistive (GMR) thin film transducer which employs a pair of flux guide pole members that define a magnetic transducing gap.

U.S. Patent Application Publication US 2003/0143431 A1 to Hasegawa, "CPP Magnetic Sensing Element in Which Pinned Magnetic Layers of Upper and Lower Multilayer Films are Magnetized Antiparallel to Each Other, Method for Making the Same, and Magnetic Sensing Device Including the Same," discloses a CPP configuration of two stacked dual spin valve sensors, each of the dual spin valve sensors including a free layer positioned between an upper and lower synthetic pinned layer.

U.S. Patent 5,668,688 to Dykes et al., "Current Perpendicular-to-the-Plane Spin Valve Type Magnetoresistive Transducer," discusses a transducer which includes a spin valve ("SV") structure comprising a pinned ferromagnetic layer adjoining a first end portion thereof and a freely rotating ferromagnetic layer adjoining an oppositely disposed second end portion thereof.

Sincerely,



Stephen B. Ackerman,
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Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)	Application Number
HTIRC-03-007	10/812,695
Applicant	
Min Li et al.	
Filing Date	**Group Art Unit**
03/30/04	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6473279	10/29/02	Smith et al.	360	324.12	1/4/01
	6466419	10/15/02	Mao	360	324.12	10/12/00
	5627704	5/6/97	Lederman et al.	360	113	2/12/96
	5668688	9/16/97	Dykes et al.	360	113	5/24/96

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FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation YES	Translation NO

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	US Patent App. Pub. US 2003/0053269 A1 to Nishiyama, Pub. Date 3/20/03, Filed 9/11/02, US Cl. 360/324.1
	US Patent App. Pub. US 2003/0143431 A1 to Hasegawa, Pub. Date 7/31/03, Filed 1/21/03, US Cl. 428/692.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.